

Notes from Book of Hyems

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by

Amos A. Evans - 1806



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Physick's Lectures
by

Amos A. Evans. 1806.-7

~~Copy of the~~

Amos A. Evans.

1808

Amos A. Evans



Philip Syng Physick
Lecturer on
the Principles of Surgery
Philadelphia

Notes from Doct. Physick's
Lectures.

Tuesday 11th Novem^r. 1806

In inflammation there is swelling, redness, and pain; the swelling is increased in part by a greater quantity of blood in the vessels of the part, which take on an increased action, & in part by a pouring out from the minute vessels, of the gelatinous ^{or coagulable} serum of the blood, into the cellular interstices. In inflammation the heat of the part is never greater than that of the animal temperature. - When there is such a sense of heat as to become disagreeable to the patient, cold air, or cold water, may be applied. but when the temperature is reduced so as to become agreeable to the patient, the cold should be removed; as the Dr. then believes it then acts as a stimulant. Inflammation should be attempted by resolution, the remedies for which are 1st blood letting, 2^d purging, low diet, rest, neutral salts, to which antimonials may be joined with advantage. The diet should be entirely vegetable. (10)

all kinds of Stimulating food should be avoided. boiled rice, ripe fruit, &c. are good - broths and soups are bad - apple water, barley water, tamarind water, lemonade, &c. are good drinks.

all spirituous liquors should be abstained from. When inflammation seizes a particular part in fevers ^{or} ^{call critical abscesses} &c. unless situated near some large blood vessels, or part where a suppuration would do considerable injury, it should never be resolved. In warm weather when a tetanus is apprehended inflammation should be excited by applying a Blister immediately over the wound. Blisters applied to Phlegmons are of great service towards removing them.

Dr. Physick was call'd to a patient who was said to be dying from a Bruise received just above the external ankle some days before, - when the Dr. saw him, he was in a universal tremor, so much so as to be unable to articulate a single sentence, his pulse was low & quick, those disagreeable symptoms were removed in

an hour or two, by a dose of Lardum - and
some of the same Medicines applied to the
wound, in a Poultice. Dr. P. has seen an inflam-
mation of the eye increased to such a height as
to cause an opacity of the Lens, this inflammation
resisted all attempts to remove it, till a small
artery on the inside of the upper eye lid bursted
and discharged a pint of Blood - the consequence
was the sight was directly restored and the
inflammation ceased. Where the System is
affected, general bleeding should always precede
local - . Friday November 14th 1806

An Abscess is a circumscribed tumour con-
taining pus - pus taken from a healthy sore is
of the consistence of cream of a light straw colour.
A Bread & milk poultice, is the best application
to an Abscess. - Abscesses in parts immediately
necessary to respiration, as the face &c. should
be opened immediately - when an abscess is formed
on any part of the face it should be opened soon
as opening it, prevents the ugly appearance of a boil
an application of a Blister over a carbuncle, often
causes an absorption of the pus. when inflamed

inflammation pierces vital parts, a hectic fever generally
attends, which consists in debility - slow. quick
frequent pulso. chills, & night sweats, common
assumes the appearance of an intermittent. This
Hectic has been supposed by Cullen & others, to
be caused by an absorption of pus thro the ducts
denies - as he has ^{often} known the absorption of large
quantities of pus to take place without any heat
attending as in Puerper. &c. he supposes it to
be by Sympathy as ~~the~~ inflammations of
vital parts ^{& ligaments & tendons} ~~cause~~ great commotion in
the system. Hunter has supposed that the
blood vessels of an inflamed part take on the
office of glands, & secrete pus. Of Inflammation
of the Mammary, or Breasts of women
This the Mother is liable to this disease, any
time during the time she suckles. It may
be owing to mechanical injuries. to taking
cold &c. the inflammation may attack the al-
veolar membrane or the glands. Cure, is per-
formed by bleeding, purging - low diet - anoint
the part with warm oil - a poultice of bread
and milk with lead water. if it does not yield

to those remedies apply a Blistn over the part. When an abscess is ~~from~~ suppuration takes place, open the abscess with a lancet. afterwards no other application is necessary than a poultice of bread & milk. —

Paronychia. or felon this is a painful and burning swelling at the extremities of the fingers. — it is of 3 kinds. 1st. when ~~there is in~~ situated immediately below the skin 2nd. when in the cellular Membrane. and 3^d. when it attacks the periosteum, or ^{the} sheath of one of the tendons. The only effectual cure is to make an incision, sufficiently large, down to the part affected, — when fungus arises, it is from the ~~the~~ incision being too small, which is cured by enlarging it with the scalpel.

Psoas. or Lumbar Abscess is an abscess of the psoas muscle, situated on the anterior part of the Sacrum — is sometimes mistaken for Hernia. On pressure an evident fluctuation of matter is perceived — when one hand is placed on the ~~external~~ ^{on} tumor of the thigh, & the other on the Abdomen. by alternate pressure, the tumor may be made to fluctuate backwards, & forwards. — this disorder is generally fatal. ~~the prognosis~~ after the abscess is (3)

opened. Hectic fever comes on, and carries off the pa-
tient. this the Dr. says, is not owing to an absorp-
tion of the matter as generally believed, but to the
inflammation which is induced ~~by the~~ on the in-
ternal surface of the cavity, by the access of the exte-
rial air. - This it has been supposed, might be remedy-
ed by making an incision thro' the skin from below
upward. then continuing it further thro' the cellular
substance, & at last by depressing the point of the
Lancet, to ~~make~~ enter the cavity. after the matter
^{is} all drawn off in this manner the wound
could be easily closed, & retained so as to prevent the
air from entering. The Dr. says he has never been
so successfull as to cure a single case of this disease.
He gave a description of a case of this kind that
came under his notice. he made the opening as
here directed, and drew off several ^{pounds} of pus.
~~and~~ fever came on, which was cured by repeat-
ed bleeding, & other ~~successes~~ Antiphlogistic reme-
dies. but at length a Hectic succeeded, ~~so that~~ that no
patient. in this case the Spine was very much
bent. the bones of which, the Dr. observed saw a comple-
adhesion had taken place between the ^{oblique processes of the} bones of the 6th
Lower ^{Dorsal} vertebra, & the 3^d adjoining one of the Lumbars

one of the vertebrae ~~was~~ on the forepart, was completely absorbed, which caused ~~on the spinal~~ lumbar vertebra to go off from the dorsal at nearly an acute angle. The costaliges were likewise absorbed - the bones came ^{consequently} in close contact, and adhered firmly.

Nov. 18th.

Erysipelas is a diffused red purple swelling, which spreads itself irregularly over the skin - attended with pain, not of the acute but of the burning kind. It is situated in the cutis vera. it differs from the adhesive inflammation, in extravasating serum. When it produces ~~serum~~ suppuration the serum is poured into the cellular membrane, which travels from cell to cell and sometimes produces gangrene.

The cure of Erysipelas the same as of common inflammation; the antiphlogistic ~~serum~~ regimen & Application of wheat flour sprinkled on the part. - Blisters applied over the part put a stop to it in a very short time the blister must ~~be~~ cover and proceed rather higher than the upper edge of the inflammation: when it suppurates open immediately... Mortification is the complete & entire death of the part. Mortification is ~~th~~ of two kinds, one, the effect of inflammation, the other, not. The appearance of a part about to mortify is first red, it afterwards as the Mortification proceeds becomes livid, & ~~at~~ last black. A mortified part is generally covered with livid blotches containing serum.

Cure of a Mortified part - as frost bitten limbs, &c. all that can be done in this case, is to apply a bread & milk poultice moderately warm, & wait till the mortified parts separate: if the system is very much reduced give Bark, wine, & opium - in cases of mortified parts in old people, opium has been found of more service than either bark, or wine. . . Never perform amputation until mortification stops

Dr P. was once induced by the repeated solicitations of the patient, to amputate a limb before the mortification stopped. the consequence was, the mortification came on in the stomach & the patient died. -

Friday Nov. 12th
Carbuncle - is situated in the cellular Membrane and generally mortifies - they are mostly found on the back & are attended with a burning pain - Blisters applied to the surrounding inflamed parts generally stops the mortification - Circular incisions thro' the skin around the mortified parts and across them, have been found very effectual in curing mortified carbuncles. they are attended with pain, which is relieved by pressure this pain is occasioned by the convulsive action of the ~~Carbuncles~~ Bloodvessels. Dr P. mentioned several cases of ^{mortification} ~~carbuncles~~ cured and stopped by the application of Blisters - if the foot for instance is mortified

fixed & spreading fast upwards the application of a
Blister immediately above the mortified part which
~~was~~ ought to surround the leg, will cure it.

He told us of several instances when Bark and o-
ther remedies had been tried in vain, the mortifica-
tion still continued to increase - a Blister was ap-
plied, & they soon were cured. He seen a patient that had

the Glans penis mortified - a Blister was applied that sur-
rounded the penis the mortification stopped, & the dead
part sloughed off. one of the cases was in a letter from
Dr. Wistar - another from Dr. Rush, & a third from Doct
Church - all establishing the efficacy of Blisters in
the cure of mortification -

If a Blister is applied
to a part that is about to mortify it stops it. - The em-
liment poultice with charcoal, the carrot poultice
& several others, have been recommended to ~~mortify~~
cure mortification - but these the Dr. says do no good
unless it is after the part has mortified, when they
correct the factor by their antiseptic qualities -

Dr. P. says he has found nitric acid diluted with
water to answer better than any of the poultices in
correcting the factor, which is after so great as to be in-
tolerable to the patient...

Scalds & Burns - ~~Burns~~ When burning, ^{penetrate} the cavities of

done by compression with the tourniquet - the next thing
is to cleanse away the clotted blood from the wound
by means of a sponge dipped in warm water, in order
that the mouths of the bleeding vessels may be seen, &
secured by ligatures - the ends of the divided arteries
in the lower part ought also to be secured, or when
the tourniquet is taken off the hemorrhage will re-
turn from them, by means of the anastomosing
branches. but when the wound is very high up on the
limb, & in some other cases, it is impossible to apply
the tourniquet - in these cases the artery that supplies
the part ought to be compressed by the hand if possible
as for instance the artery which supplies the up-
per extremities may be compressed as it passes over
the first rib - & that which supplies the lower extre-
mity may be compressed in the groin. when the
artery cannot be surrounded by ligatures, compres-
sion with dry lint - or flour sprinkled on the part
must be tried - but if these fail, the hot iron
must be ~~used~~ applied. after the blood is stopped, bring
together & retain the sides of the wound - this may
be done 1st by adhesive plaster, this ought to be
spread on linen, & compressed & bandages applied
above. 2nd by Stitches - never draw the stitches too tight,
or the parts which are pressed by them will mortify -
an Union will generally take place in about 48 hours

during which time the dressings ought not to be re-
moved - if inflammation comes on, bleed & reinjoin
the antiphlogistic regimen - if on the contrary the
patient is weak, inflammation does not come
on - Animal food, & some spirituous liquors are
necessary. The Doct^r informed us of the case of a child
that had made a large ^{wound} ~~subscapular~~ in the bottom
of the foot - which could not by any means be
stopped, for the arteries could not be taken up - in
this case he treated it successfully (by compressing
the leg means of the Tourniquet and a copper hoop
rapped round with soft cloath, placed beneath it
the anterior & posterior Tibial arteries - in a short
time the wound healed & the Tourniquet was taken
off - the use of the firm ring under the Tourniquet
was to prevent it from compressing equally the whole
leg, which would have prevented the return of
venous blood & have produced very distressing con-
sequences... In wounds where you have reason
to suppose an artery is wounded, never introduce
Lint, or any other substance between the edges of
the wound - but let the parts unite by the first in-
tention ~~if~~. He told us of several cases where the
artery was wounded and a flow of blood had taken
place into the surrounding cellular Mem-

: brace - that by rest, a recumbent posture, & bleeding the wounds in the artery closed, & the patient got well without taking up the artery —

Friday Nov. 28th 1806 —

The Dr. came next to speak of Contused wounds — these are made by flat instruments — a soft bread & milk poultice is the best application to the parts — opium may be given to allay the pain. — ~~from~~ Contused wounds are divided into 3 kinds — viz. contused properly so called, — punctured, & gunshot. Punctured — in punctures the mouth of the wound is small, but deep. When convulsions come on in consequence of punctures, introduce the director & dilate the wound. — When a part is punctured in warm weather, it ought to be prevented from healing immediately, by stimulant applications, or by a generous diet. — Gun Shot wounds — when the slough separates in consequence of gun shot wounds, the surgeon ought to be watchful, as a hemorrhage then generally comes on, if a blood vessel has been injured — at first they seldom bleed much, owing to the ball killing the parts — the death produced in the parts depends on the velocity of the ball — if the ball flies with little velocity, the wound is easier cured than when the velocity is greater — owing to the greater death produced in latter, than the former case. If the Ball be deeply lodged, it will be improper.

to dilate the wound in order to extract it - it will
also be wrong to probe the wound or to introduce
long forceps. the best application to the wound is
a poultice of Linseed, or Bread & Milk, which ought
to be continued till suppuration comes on. if the
patient is very weak give a sudorific Anodyne - do
not bleed too largely at first, or Tetanus will come
on - as soon as the Suppuration comes on give Bars-
tc. -- Doctor Physick took 186 ounces of blood
from a man who was shot thro' the ^{the lungs & around} Thorax -
in wounds of the Thorax, the treatment the same
as in pleurisy - Blisters to the side &c. When the
Spinal Marrow is injured above where the Thence
Nerves go off the patient generally dies ~~about the~~
~~14th day~~ - a wound of the Bladder where the urine
escapes into the cavity of the Peritoneum is fatal.
In wounds of the Intestines when any part protrudes
replace them & unite them by the interrupted suture
Tuesday December 2^d 1806

In wounds of the Eye Ball the best collyrium is the
juice of Sassafras - if it inflames bleed - purge, &c. In
wounds of the face, keep the sides of the wounds in
close contact - adhesive plaster spread on liniment
answers every purpose, if no loss of substance is sus-
tained - even the lips when entirely divided thro'

may be retained in this manner - in contused wounds of the face apply poultices. In Wounds of the Tongue, use the interrupted suture - in wounds of the external ear it is also necessary. In wounds of the Trachea the interrupted suture is necessary. the external wound may be treated either by adhesive plaster or stitches - do not draw the external skin close together. Stop the blood in the first place. Wounds of the Esophagus may be retained by the interrupted suture ^{by} binding down & confining the skin to the Sternum. Of Penetrating Wounds - they sometimes enter the cavities of the Thorax & ~~peritoneum~~ Abdomen. A great degree of inflammation generally comes on. If the Intercostal artery is wounded, & cannot be taken up, it has been advised to pass a ligature around the rib & thus compress it. In deep wounds of the Thorax the poultice ought to be confined in a little Bag of gauze to prevent any part of the poultice from falling in. Inflammation is not brought on by the recession the air to the cavity - as has been generally supposed. Of Wounds of the Abdomen - If an opening is made by a wound into the cavity of the Abdomen - it is always desirable to unite it by the first intention - use the interrupted suture - pass the needle from within outwards - about $\frac{1}{4}$ of an inch from the edge of the wound. let the stitches be about $\frac{1}{2}$ an inch apart. use the Anti-

phlogistic regimen. Blood low diet. Keep the bowels
open &c. The danger in wound of the Stomach & Abdo-
men is from the contents of these viscera escaping into
the cavity of the Abdomen. As soon as it is discovered
that either the Stomach or intestines has been wound-
ed, they should be united by the ~~interrupted~~ by the inter-
rupted suture. The Ligature need not be brought
out of the external wound - it is found that they
always pass into the intestines. the ligature should
be cut off close to the intestine - or the knot will ir-
ritate & inflame the contents of the Abdomen.

When a bowel is wounded the peristaltic mo-
tion is very much lessened. When the bowel is
stitched - stick up the external wound. let the
patient be kept chiefly on drinks. if inflammation
& fever come on, bleed &c.... A child in this city was
wounded in the abdomen by shot - which passed thro
the intestines & were discharged by stool - the patient
died, & when dissected, a number of worms were found
to have made their way thro the holes made by the
shot as far as ^{they} would permit. in this case the Dr
thinks the child might have recovered if it had not
been for the worms. The Dr. Related a case given to
him by Dr. Archer, of a man who was wounded
so largely in the Stomach that the bread & cheese
which he had eaten just before, fell on the floor
before him - Dr. A. stitched the wound & the patient
recovered. When the liver is wounded a distrop-

ing pain will be felt in the part, of the dull, heavy kind. & if the right Lobe be wounded, there will be a pain in the right shoulder. Keep the patient on low diet, bleed, ~~the~~ rest - & Barley water is ^{good} very to support the strength & at the same time to give little nourishment, or stimulus.

When the Kidney is wounded the patient voids bloody urine - if the urine escapes into the cavity of the peritoneum it will be inevitably mortal. In wounds of the Joints great pain & inflammation come on: the Limb must be kept in such a ^{position} manner as to approximate the sides of the wounds. They recommends the interrupted Suture, but the Dr. thinks adhesive plaster will be sufficient, if the Limb is kept in a proper position - if however, you use the Suture, never stick thro' the Capsular Ligament. Bleed, Rest - low diet - antiphlogistic regimen &c, are proper & necessary.

Friday Decr 12th

When a wound penetrates the capsular ligament a splint should be applied, to prevent motion of the joint. When the ligaments of the joint are very much lacerated and the ~~ends~~ ^{ends} of the bones injured it is called a compound ~~wound~~ ^{fracture} - when this ^(very large) happens to any of the large joints as the ankle or elbow amputation should be performed; for if it is not done, inflammation ^(but if the wound is small try to unite it by the first intention) & fever, sometimes tetanus & death come on. In compound

Fracture when the patient will not submit to an amputation. it has been advised to produce an anchylosis, or bony union, to do this the cartilage must be removed, for cartilage neither inflames nor ^{granulates} ~~granulates~~ to favor anchylosis it is absolutely necessary to keep the joint perfectly at rest. for this purpose splints should be applied.

of Wounds of the Nerves & tendons. when a nerve is divided the pain is very severe at first inflammation takes place round the wound. pain & numbness ~~and~~ of the limb ~~then~~ ^{comes on}. It has generally been advised to cut thro, the ~~divided~~ ^{wounded} nerve or tendon, but the Dr. thinks ^{(if however suppuration comes on cut thro, the} it does no good if not ^{the fascia to let out the pus} hoar.

When a tendon is entirely cut through the wound must be approximated & kept together by adhesive plaster. when the Tendo Achillis is wounded the external skin is very often tucked in between the ends of the divided tendon, when this happens the skin should be drawn out & stitched together. The patient must not be permitted to walk for 6 or 8 weeks.

of Wounds of the Veins. the veins when wounded sometimes inflame on their inner surface ^{which} extends along for some distance. this generally happens from bleeding, & is supposed to arise from the wounding of a nerve or tendon. the arm swells & inflames. is generally bent so that the patient cannot straighten it. The Dr. thinks it is owing to the wound not uniting by the first intention, but ~~suppurates~~ ^{suppurates}. & suppurates, the matter formed within the vein is pushed on towards the heart, & mixes with the circulating mass. ~~and~~ an abscess sometimes takes place between the sides of the vein, in consequence of inflammation, ~~in the~~ the passage of ~~the~~ it is

stopped up, ~~and~~ ^(sometimes) and thus we find that ^{we} cannot
bleed again in the same vein. The best applica-
tion is a Blister ^(always cover the orifice with a piece of sticking plaster) applied to the inflamed surface,
^(before you apply the blister) the Doctor knew it to fail - before the blister heals
the patient is well... Dr. P. read to us Dr. Hunters
account of Inflammation of the veins. - As this
is generally mistaken for a wound of the nerve or a tendon
we see how dangerous & hurtful the operation of cutting
thro, the parts, as recommended by Mr. Bell, in order
to entirely divide them, would be...
~~when we attempt~~

Tuesday 16th December 1806.

When we attempt to produce anchylosis at the elbow
in consequence of a compound Fracture of that part,
the arm ought to be kept in a bent position, otherwise
it will be useless. Exactly the contrary must be obser-
ved in the treatment of anchylosis of the Knee; the
leg must be kept straight, or it will be of no kind of
service to the patient..

Of Ulcers. I will confine myself to ulcers situated
on the leg. - If an ulcer is situated on a sound part
in a healthy constitution, it granulates - coagulating
Lymph is thrown out on the surface - it is of a florid
red colour, unless the patient has walked on it, or
kept it in a dependent posture. in this case, it puts
on a purple colour. As long as the sides of an
ulcer retain their life, the blood in the vessels of the
part is of a dark colour. Granulations possess a
power of contracting, & diminishing the sides of the
ulcer. Formation of new skin begins when the

granulations rise as high as the surface of the old skin. Sometimes the new skin begins to form at more points than one - in this case the cicatrization goes on very rapidly. Cure apply dry lint on the surface - & cloaths spread with cerate above - around all apply bandages moderately tight. Do not stuff the lint between the sides of the ulcer - but apply it very lightly on the surface; for if it is stuffed in the ulcer it irritates it, & acts exactly as a pea in an issue. Another Method has been recommended, which has been said to cure wounds very speedily; viz. to approximate the sides of the ulcer as ~~close~~ near as possible, by a adhesive plaster - the hair must be shaved from the leg before the plaster is applied. In some cases it is possible to bring the sides of the ulcer completely in contact. By this Method the size of the cicatrice will be much lessened. When ~~then~~ the granulations become hardened apply lunar Caustic or expose the ulcer to the action of the air - & scales will be formed, under which a new skin soon appears. Ulcers situated on the legs which continue require the assistance of a Surgeon.

Place the patient a horizontal position, & keep him so, till the ulcer is cicatrized - ~~then~~ Apply bandages - these are of 3 Kinds, viz. 1st the laced stocking which, if made so as to press equally, is the best. 2^d the cotton roller - this is most used, as the Surgeon can compress equally with it. 3^d Strips of adhesive plaster. Sometimes the bloodvessels of the legs become weakened & relaxed, so that they are una-

: ble to resist the weight of the circulating fluids - they swell & become Oedematous - blood is sometimes discharged from the ulcer with the pus - a dependent state of the legs increases the gravity of the fluids on the part, & consequently disposes them to swell - confining the patient to bed is the best method of preventing the Oedematous swelling, or applying the bandages before he rises - It was formerly very common for Surgeons to fill the ulcers with Lint - or dressing from the bottom as it was call^d. A patient was once attempted to be cured of Fistula in Ano. by dressing from the bottom by several very eminent Surgeons - but their attempts were ineffectual - he left off all applications & cured himself very soon, merely by sitting in the Mud of a Spring - never dress Fistula in Ano from the bottom. Fevers have sometimes cured sore legs - pleurisy has cured them.

Friday December 19th. 1806.

Ulcers may be divided into 8 different Kinds viz. 1st ^{This ulcer does not secrete pus but a thin serous fluid} The inflamed Ulcer - it is known by the Ulcer becoming painful - requires nearly the same treatment as other local inflammations. The best application is a bread & milk poultice - the patient should be kept in bed - when the inflammation is reduced by bleeding, &c it returns to the state of a simple ulcer, & should be treated as

such. - 2^d Fungous Ulcer, in this sort of ulcer
simple pressure has been found useful - where this
does not answer apply Lunar Caustic. 3^d Ulcers
Situated in Adematous Limbs - in this species
of ulcer the treatment for inflammation is
^{of the hand} proper. ^{in the beginning} Sloughy Ulcer - is always attended
with considerable pain. Bark is to be used freely
likewise opium, a cordial diet. fomenting & poultices
mixed with charcoal - In very warm weather
in this kind of ulcer Magots are very apt to form
~~in the ulcer~~, to destroy these & to prevent their re-
turn, & to correct the fætor, Nitric acid diluted
with water has been found very useful. 4th In-
dolent ulcer - in this kind of ulcer there is no
disposition to heal - the edges of the ulcer are hard-
ened - to cure it, remove the callous edges, by cut-
ting them off with a Knife; or where the patient
objects to the Knife. Caustic Alkali applied for
10 or 15 Minutes will remove them: apply Caustic
to the middle of the Ulcer - But take care
you do not touch the granulations near the
edges with the Caustic - Mercury given as a cathartic
produces Fyalsus has been found very useful
in curing ulcers, especially of the indolent kind.
6th Carious Ulcer - in this ulcer a portion of

bone is dead - as soon as the portion of bone is loose, extract it with a pair of forceps. when this is done the ulcer is reduced to a simple one.

It is frequently necessary to enlarge the orifice in order to extract the exfoliated bone. When however, the bone exfoliated has been so long as to render it impossible to enlarge the ~~wound~~ ^{orifice} sufficiently to extract it, without great danger, the Dr. has broken it into pieces by a pair of pincers & then extracted one piece at a time.

It is ~~now~~ necessary to know whether or not the bone is sufficiently loose to be extracted, before you enlarge the orifice. - to know this, press against the bone with the end of a probe introduced in the wound, & if the patient on the bone being pressed, complains of much pain, & a small quantity of blood comes out, we may conclude it is loose. but if the patient should ^{not} be pained, when the bone is pushed in this manner, ~~the~~ ^{it} is not loose enough. The pain in this case is produced by the fragment of bone being pushed against the tender granulations which have arisen under it. ^{of the} best as are attended with a varicose ^{state of the} veins. A tight bandage, or laced stocking, will often cure it - they must however be continued, or the vein will again become varicose. An operation has been performed with success, by tying the

Vein Saphena, where it runs along side
of the knee. The operation should be perform-
ed when the patient is standing as the veins
are then full. But the Doct^r has found
it very difficult to perform it in this man-
ner, owing to the patient trembling very much.
Another method he has found to answer
better viz. to apply a Tourniquet above the
knee sufficiently tight to compress the vein
without pressing the arteries. the patient
must then be laid upon the Table. the
skin immediately above the vein is to be
caught between the finger & thumb of the
Surgeon on one side, & by an assistant in the same
way on the other; a Scalpel is then to be thrust
thro the skin with the back towards the
vein, which will bring the vein sufficient-
ly in view. ^(A Ligature by means of) a Silver Needle with a blunt
point must next be pass^d round the vein
& tied. The Dr has found it necessary to intro-
duce a small compress of Linen between the
throat & the vein on the upper side. The use
of this compress is to allow you to cut away
the Ligature about the 5th day without any dan-
ger of wounding the vein - which you might readily
do if the compress was not there. When the vein is
thus secured, bring together the sides of the wound
~~by~~ and retain them by means of adhesive

plaster - allow^{ing} a small opening for the ends of the ligation to pass out - . The danger attending this operation is trifling, as the subsequent inflammation is generally slight.

8th. Ulcers attended with a particular diseased action - they may be divided into general & local - general when the whole system is affected, & local where the part only. An ulcer sometimes follows a venereal Buboe of a very curious kind - it spreads like a ring worm - the part last touched skins over, & the other edge breaks out. An instance of this kind of Ulcer we had in the venereal wards of the Hospital this winter.

Tuesday 23^d December.

of Fractures - . a fracture may be defined a solution of continuity in a bone caused suddenly ^{by external violence}. When people seldom fracture their bones by falling - owing to the Muscles being relaxed. When a bone of the extremities is broken the patient experiences great pain on the least motion - a noise may sometimes be heard by the ends of the bones rubbing together - the ends generally pass each other - & the outside of the limb is enlarged by the end of the bone. Sometimes swelling and convulsions come on. Fractures are divided into Simple & compound. a compound fracture is when besides a solution of continuity in the bone, a wound of the external soft parts

communicating externally & with the cavity of the fracture.
also attended a simple fracture, when the bone
only is injured. To cure a compound fracture,
put the bone in correct apposition, & use
means to retain them so - the wound if small,
will unite by the first intention - if inflamma-
tion succeeds, use bloodletting &c. the best appli-
cation to the part is a soft bread & milk poultice
with lead water. To reduce a simple
fracture relax the muscles as much as possi-
ble. Sometimes it is necessary to bleed ad deliquium
anemic in order to reduce a fractured limb, but
this is seldom necessary. Stiff pastboard is the best splint
that can be applied to keep in place a fractured
bone - this pastboard should be wet in warm wa-
ter before it is applied, this causes it to become
easy & when they grow dry they answer every purpose
of great inflammation, pain & swelling attend the
fracture they should be allayed before we attempt
to reduce the bones. In some cases the bones refuse
to unite, to remedy this & to produce an union
between the ends of the fractured bones, it has been
recommended to cut down to the bone & saw
off the fractured ends, & thus reduce it to the state
of a ~~simple~~ ^{fracture} fracture. but this operation the D^r would
not advise. he thinks a Seton armed with a
skinn of hilk & introduced thro the limbe between
the ends of the fractured ~~bone~~ ^{bone} would answer much
better. it must be kept there till an union takes
place ~~between the bones~~. it acts by producing

inflammation ~~but on the bones~~ & consequent union between the ends of the divided bones. this operation the Dr has performed twice & both times with success.. He has known bony union to take place after having been deferred 9 months; without performing any operation... for an account of an union between the divided ends of the humerus, which Dr P. produced by means of a seton, see the New York Medical Repository. Decr. 26th. Friday

of Fractures of the bones of the Nose. In most instances the fragments are depressed below their common situation. pass some smooth substance into the Nostril, & raise the bone. If the fragments are loose introduce lint into the Nostril in which a gum elastic cannula must be placed for the patient to breathe thro, but it is not absolutely necessary to introduce the cannula for he can breathe thro. the other nostril. The only dressing necessary is a piece of leather spread with adhesive plaster.

of Fractures of the lower Jaw. When the bone happens to be broken on both sides the anterior part, or chin is drawn down by the Digestive Muscles. A tooth is generally ~~loose~~ loose immediately above the fracture, & it has been recommended to draw the loose tooth - this however must never be done, for it makes an opening into the fracture constituting a compound fracture fasten the loose tooth to the others by a thread. The upper jaw is the best and the only splint that should be applied. the teeth of the lower jaw

must be placed against the upper jaw & confined there by means of a simple roller round the head. The patient is to be nourished entirely by liquid food introduced between the teeth, and the fracture will generally unite in about 3 weeks. The same method of treatment is to be used when it is broken near the Condyle - the patient must be kept from speaking or using his jaw in any manner. . . .

Fractures of the Vertebrae. when this happens above where the Phrenic nerve goes off the patient dies immediately - but when below this he lives generally about 5 days with a paralysis of all the parts below. the feces come away without consciousness; but there is an entire suppression of Urine - therefore it must be drawn away at least twice a day; or what is still better to have a gum elastic flexible catheter in the bladder. When the vertebrae of the neck are injured it is dangerous to turn the patient on his belly in order to examine the part, but he may be laid on his side and thus examined without any danger of being strangled. Of Fractures of the Clavicle - the Clavicle is very often fractured, and mostly

about its middle. The shoulder of the affected side falls down considerably-- you will generally find him leaning on his elbow, & to the side affected..

generally displacement of the bone takes place, tho, sometimes it does not, especially when it happens between the insertion of the cartilage from the coracoid process, & the scapular process of the same bone.. The following is the method of applying the bandages for a Fractured clavicle.

1st Place a large pad stuffed with horse hair (or flannel doubled several times will answer the same purpose,) of the shape of a wedge, ^{put} the thick end up, or towards the axilla under the arm it to be confined in this situation by means of a roller passed round the body-- the arm is then to be ~~drawn~~ ^{pressed} down with the elbow touching the side; which will extend the clavicle, & the wedge under the arm will counteract the pectoral muscle. a piece of soft linen is next to be placed between the arm & chest to prevent the retained perspiration from becoming acrid & excoriating the skin-- a roller is then to be passed round the arm & body ~~near~~

taking care that it is not drawn so tight as to stop the pulse in the arm, but previously to this the hand ought to be placed in sling made of a piece of the roller which may be pinned, or sewn to the first roller that was passed round the body. The roller must then be continued from the opposite side in such a manner as to cover, & preupon the frac-

turned part. if the skin has been lacerated above the clavicle it ought in the first place to be covered with a small piece of adhesive plaster.

The rollers ought to be pinned or sewn in a great many places to prevent their being disarranged. ... Tuesday Decr. 30th

of Fractures of the Scapula - of first of Fracture of the acromion of scapula. The portion of the acromion that is broken off is always pulled down partly by the weight of the arm, and partly by the Pectoral muscles. The os humeri must be pushed up and kept so for 4 or 5 weeks in which time it generally unites. a piece of linen is to be placed between the arm & the side - the fore arm be bent. a bandage is to be placed around the arm & body - to keep the humerus confined after it is drawn up. When the angle of the scapula is broken it is drawn forward and a little upwards by the action of the Teres Major & minor - while the other part is drawn down. The arm must be drawn forward and upwards, with the hand on the other shoulder, & kept so for 3 or 4 weeks, by applying a broad bandage around the arm & the chest, having previously placed a bit of linen between them.

of Fractures of the ribs - when any of the ribs are fractured the patient always respire with difficulty and pain - there is frequently a sort cough attending which always gives him pain. all that we can do is to apply a broad bandage round the Thorax, to keep the fractured ribs as much

at rest as possible. Mucilaginous mixtures are
useful to allay the cough & pain. if the fever
is high it is to be treated exactly as pneumonia.
Blisters cannot be applied, as the bandages are
in the way. When a fragment of the rib pier-
ces the pleura & the lungs, the air is expelled
into the cellular texture thro' out the body, causing
emp^{hem} in every part. To remedy this a small
opening must be made into the pleura between
two ^{costal} ribs. ^{Caution: insert immediately over the puncture a tube to get the air out} The cellular membrane should be kept
of Fractures of the Sternum - this rarely ever hap-
pens. but may be known by causing the patient
to exert the pectoral muscles violently, when the
ends of the bone may be heard to grate, if broken.
all that can be done for it is to apply a bandage
around the body.

of Fractures of the Os humeri - this bone
is sometimes broken directly across, but mostly
obliquely. a Fracture of the head of the os humeri
frequently resembles a dislocation, & has some-
times been mistaken for it. When the bone
is dislocated the round head of the humerus may
be felt distinctly high up in the axilla - when bro-
ken the sharp ends will be felt. If the lower frag-
ment of the head of the bone is pushed inwards next
the Torax - after the bones are reduced and brought
into complete apposition, a bandage is to be applied
round the arm - & next the splints are to be put
on - 2 splints will answer every purpose, over
which another roller is to be applied. a large
~~comfy~~ piece of flannel doubled up is to be

placed between the arm & side. In about 10 days
the bandages & splints should be taken off in or-
der to examine the state of the bones, which
if they are not in apposition may then be brought
together. In fractures of the head of the os hum-
eri there is sometimes a large extravasation of
blood from a wound of some of the bloodvessels
of the part. DePacell has recommended open-
ing to be made into the tumour, but this
should not be done, for it reduces it to the
state of a compound fracture. When if left
to itself without opening, it will be taken up by
the absorbents. The most that should be done
is after it has stood for some time without
appearing to diminish, to make a small punc-
ture into the cavity just large enough to evacuate
the contents as soon as this is done, the sides of
the puncture must be drawn together by ad-
hesive plaster & kept so till they unite. —

Friday January 2^d 1807. . . .

of Fractures of the lower extremities of the hu-
man bones. When this happens near the condyles
one of them is sometimes broken. If the condyles
are separated by taking one in each hand they can
be made to move & crepitate, when only one
of the condyles is broken off it can be moved very ea-
sily on the bone. In all fractures of the lower
end of the humerus it is very ^{necessary} to flex the fore

arm on the arm - because if anchylosis should
come on it would be much better ~~in~~ bent
than ~~in~~ straight. a roller should then be ap-
plied round the forearm and humerus. two
pieces of stiff pasteboard softened in water are
then to be applied one on the back part and the
other on the forepart of the arm. two other
splints made of stiff pasteboard are next to
be applied one on the outside & the other on
the inside of the arm. The two first pieces
must be bent to accommodate the arm
so it is to be kept in a bent position. The two
last ~~named~~ ^{named} splints are to be sawed out of
stiff pasteboard so as to agree with the bend
of the arm. These four splints are next to
be confined by a ~~small~~ roller, & then by a
broad bandage confined to the side, being pass-
ed round the body. at the end of 10 days they
are to be taken off, & the fracture examined.

They are then to be applied for 10 days longer
when they are again to be taken off and the
arm gently extended ~~for 10 days longer~~ to pre-
vent anchylosis. Of Fractures of the Middle
of the humerus - When the humerus is
fractured ~~to~~ in the middle it is very easily
bent & by this may be known. after producing
extension & counter extension by means of

assistants; & the bones are brought in complete apposition a bandage is to be applied round the arm - over which 3 splints are to be applied, & another roller round the whole. the arm is then to be placed in a sling & confirmed to the side by means of a roller.

Of Fractures of the forearm - The ra-

dial & ulna are sometimes fractured exactly opposite each other and may then be bent very easily, & a crepitation may be heard.

An assistant is to take hold of the humerus immediately above the condyles, & another assistant is to take hold of the hand - the extension & counter extension is then to be made, & the Surgeon to bring the bones in complete apposition. a bandage is to be applied moderately but not too tight.

Two splints of stiff pasteboard or shingle broader than the arm should be applied one on the outside & the other on the inside of the arm. They must extend from a little below the elbow past the ends of the fingers -

a roller is then to be applied over all, taking care to keep the thumb upward - for if by any means the thumb should turn towards the body & the bones unite in this position the patient could never after supinate his hand. The arm is to be put in a sling hung round the neck. Sometimes the radius only is broken - in this case the arm is not diminished in length. The ulna is scarcely ever broken by itself: the same kind of bandages are to be applied. Of Fractures of the Olecranon of the ulna - when this happens it is very difficult for the patient to extend the arm when bent. because the action of the Triceps Cubiti which is the extensor of the arm, is destroyed. of all fractures this is the easiest detected: a roller is to be applied from the wrist till near the shoulder - taking care that no fold of the skin is ^{left} between the fractured ends of the bone & that it is in the right situation. a long splint is then to be applied on the inside of the arm in order to keep it extended.

over this a roller is to be applied - after 10 days
the dressings are to be taken off the parts exam-
ined; and after 18 or 20 days the gentle flex-
ion and extension is to be begun to prevent
an anchylosis. Of Fractures of the Meta-
Carpal bones. The bones are to be repla-

ced - & two splints applied - ~~and~~ which are
to be confined by a roller. When
the phalanges of the fingers are fractu-
red they may be reduced & confined by
means of single splints & a roller.

January 6th Tuesday. 1807.

Of Fractures of the os femoris. The femur
is most usually fractured about the middle
of the bone - & mostly obliquely - but some-
times transversely. On examining the
limb when fractured obliquely, it will
be found 1 or 2 inches shorter than the
other. On moving the lower fragment
a considerable crepitation may be heard.
considerable pain is likewise felt by the
patient. The lower fragment is drawn up-
wards & under the upper fragment. Ex-

tension and counter extension are to be made in the usual way. To make the counter extension an assistant is to place a towel on the perineum, over the ~~pubis~~ pelvis. The extension is to be made by a towel passed round the leg above the ankle. Before the patient is laid on the bed as many of dressings as possible are to be laid down that they may be afterwards conveniently applied. In oblique fractures of the humerus the lower fragment is very apt to be drawn up by the action of the muscles - when the bone unites the leg is generally found shorter than the other. To remedy this, DePauw ^{invented} ~~has~~ an apparatus composed of two long narrow boards with holes in both ends of the external & longest, according to the improvements of Drs. Physick & Hutchison, this splint with one end placed under the axilla is made to pass below the foot. The counter extension is made by a silk handkerchief passed between the legs & continued up to the hole in the splint near the axilla, where it is to be tied. For the counter extension another

handkerchief is to be tied round the leg just above the ankle, one end of the handkerchief is to be placed on each side of the foot, & tied under it, on the sole - it is then to be continued on, & tied ~~over~~ over a block fastened on the lower end of the splint on the inside - which will make the counter extension in a straight line with the leg - & not draw the foot to one side as was the case with the one invented by Depaull which had a hole in the lower end to fasten the handkerchief to. Before the patient is laid on the bed - (or rather the mattress which is better, because it does not yield so much, if however a mattress can not be had a board should be laid between the back bottom and the bed, to keep the patient's hips ~~in the~~ from falling down.) several pieces of tape should be laid down at some distance from each other, & long enough to reach round the dressing when applied on the thigh - over these pieces of tape - a piece of linen sufficiently large likewise, to cover the whole, is to be laid, & on the linen several pieces of muslin rollers are to be laid ~~one~~ over each other, or partly over.

a broad bandage is then to be laid down
long enough to go round the pelvis & splint
the handkerchief which is to make the coun-
ter extension is next to laid obliquely
across the rest. The patient is then to be
placed on the bed, & dressings. the banda-
ges are then to be drawn round, in the
the same way the many tailed, is applied.
The splints, ~~the~~ are next to be applied the
long one on the outside, & the short one
on the inside, extending from the perine-
um to to the foot... The bandages ~~are~~
~~the~~ that make the extension & coun-
ter extension are to be drawn sufficiently
tight, & tied. Two long female linen bags
stuffed with chaff, are to be placed be-
tween the splints & the leg-. ~~The~~
~~piece of linen is the~~ another broad splint
about one foot long is to ^{be} applied on the
top of the thigh just over the fracture. The
broad piece of linen is to be drawn over
all. & the pieces of tape then drawn up
& tied. over ~~the~~ all the bandages to secure
them in their places. The broad bandage
which passes round the pelvis must be
fastened for the purpose of confining the
upper end of the ~~splint~~ external splint.

Friday January 9th. 1807. Dr Physick.

When the thigh bone is fractured directly across splints applied on each side will answer the purpose. But the splints of Desault may be used in every case. of Fractures of the Neck of the Thigh bone. They are known by the patient having been sensible of something breaking. he will be unable to rise from the ground. he cannot use the thigh.

The foot generally inclines towards the outside. tho, sometimes ^(but rarely) towards the inside.

The surgeon generally by extension is able to pull down the leg even with the other, but sometimes to do this requires considerable force. on letting it go - it immediately flies back again. If you take hold of the thigh bone and rotate it, the head of the bone will not perform part of a circle as usual when not broken, but will appear as if it turned on a pivot.

The patient will also experience considerable pain on the least motion of it. Thos Dr has known two cases of fracture of the head of the Thigh bone where bony union did not take place. Make the extension & counter extension as before directed, and


when the bones are brought in complete apposition, apply the apparatus of Desault it must be kept on for at least 8 weeks.

If it is fractured within the capsular ligament it hardly ever unites, but if it is fractured on the outside of the ligament bony union generally takes place.

The thigh bone is sometimes fractured near its lower extremity. mostly obliquely, but like all other fractures of the long bones sometimes transversely. But the most general way is obliquely upwards. on moving the bone crepitation may be felt. The thigh easily bends. If the condyles are separated by fracture. it may be known by the surgeon taking one in each hand & rubbing them on each other. The apparatus of Desault must also be applied here.

In fractures communicating with the cavity of the knee joint, a considerable swelling will come on, not from effused blood, but from inflammation of ^{cavity of the} joint. Keep the joints perfectly at rest by the splints. after 20 or 25 days however it must be gently moved. Of Fractures of the bones of the leg. It mostly happens about the middle, & obliquely - when both

bones are broken the leg is sometimes a
little shortened. The fracture may be very
easily felt on the skin. & the leg is easily
bent. The extension & counter extension
is to be made by 2 assistants taking hold
of the leg, ^{one} just above the Ankle & the
other just below the knee. Several
pieces of bandages are to be laid on a pil-
low one over the other forming what
is called the many tailed bandage. The
pillow with the bandages on it ~~are~~ ^{is} then
to be laid under the leg & the bandages
brought round it. Two pieces of stiff
pasteboard about 3 or 4 inches broad & moist-
ened in water are to be applied, one on the
outside & the other on the inside of the leg.
these are to be confined by 2 or 3 pieces
of Tape passed round them. The pillow
is then to be pushed up close to the dress-
ings and 2 Boards about 3 or 4 inches
^{broad} ~~long~~ are to be applied on the outside & inside
of the leg. extending from the knee to the
foot. these are to be confined likewise
by pieces of tapes. In order to keep the foot
in its proper position, a bandage is to be
passed round it & each end of the bandage is


to be fastened to the ~~Dressings~~ below the
Knee. To keep off the pressure of the bed
cloths a small cradle should be placed
over the leg. Two hoops will answer
this purpose very well, if about one third
of each one is broke off & then crossed
in the middle - thus  M

Tuesday Jan: 13th 1807.

The Doct. showed us the neck of a thigh
bone which had been fractured - in this case
the whole neck of the bone was removed by
absorption. In consequence of the neck being
removed the head of the bone came in con-
tact with the body & formed a complicated joint
being topped with cartilage.

Fractures of the Tibia - this bone is mostly
fractured near its middle. it is drawn up
by the action of the muscles a very little
way. when fractured ~~transversely~~ ^{obliquely} the mus-
cles generally draw the lower end of the bone
immediately outward, forming a sharp an-
gle which can be easily felt. When it
is fractured transversely it is very difficult
to be known. The dressings are the same
as when both bones are broken. When
it is fractured at the upper extremity a com-
munication sometimes takes place with
the knee joint. The patient should not be al-
lowed to use it for 6 or 8 weeks. otherwise
the inflammation & swelling will be very

great. the fragments sometimes irritate the
knee joint-causing convulsions-inflamma-
tion &c. in this case permanent exten-
sion will be necessary to cure it, & it may
be made by the long splint of Desault
of Fractures of the Fibula - mostly hap-
pens from a violent abduction of the
foot. the bone is pushed directly inward
towards the Tibia. By taking hold of the
foot & making extension it is easily
brought into its place. apply a splint
on each side of the leg - do not apply
the bandages ~~with the foot in~~ tight
or the bone will be pushed inward.

When both bones are broken obliquely
by the muscles sometimes draw them
up so as their fragments irritate the
surrounding ~~parts~~ parts, causing
convulsions, &c. to keep the bones in appo-
sition it is necessary to make permanent
extension. This may be done by 2 splints
invented by Desault & improved by Dr.
Hutchison - in this form.  viz. long
enough to reach from the knee below the
foot - - The many tailed bandage is to
be applied after the ~~extension~~ extension & counter
extension is made - two long tapes are
then to be confined on each side of
the leg just below the knee, by a roller.

The splints are then to be applied. taking care to put two bags filled with chaff between the splints & the leg. the upper end of the splint is to be fixed by the tape being put thro, the 4 mortices which are in it. a cross bar is to be passed thro the mortices in the lower end some distance below the foot. this bar should be made to fit tolerably tight. a bandage is to be passed round the ankle under the foot - & by it the extension is to be made over the cross bar. a piece of tape is to be passed round the splints below the foot in order to confine them together. The objections to these splints are that the bandage below the knee in order to answer the purpose, is so tight as to press the veins & lymphatics, causing the foot to swell. this sometimes happens. but may be prevented by applying bandages round the foot which prevents it from swelling.

If inflammation & swelling come on before the dressings are applied - they should be reduced by bloodletting &c. before one of the dressings are put on.

Friday January 16th 1807.

Of Fractures of the Patella - it is sometimes caused by Muscular contraction - but very often by some injury done to the part by external violence. When it is fractured transversely the patient cannot use the leg. ~~if~~ and if standing up will fall down upon bending the leg the fragments will be drawn asunder - it is sometimes fractured obliquely, & sometimes longitudinally, in the direction of the limb. When fractured transversely it is very easily discovered.

The patient should be laid on his back with a number of pillows under his head and shoulders. A number of pillows should be placed under the thigh and leg, so as to extend the leg on the thigh & to bend the thigh on the body - in order to relax the extensor muscles of the thigh. A bandage should be applied on the leg commencing at the foot, on arriving at the knee draw down the upper fragment of the patella, taking care to fold the skin behind the ~~patella~~ upper part of the patella. A compress of linen is then to be applied above the upper fragment in order to keep the fragment in its place. this is to be confi-

and by continuing the roller up the thigh
it is necessary to apply the bandage on the an-
terior part of the knee. ~~the~~ otherwise
it would swell very much. The reason why
the bandage is applied below the knee is
to compress the vessels & lymphatics in order
to keep the leg from swelling - which would
be very apt to be produced by the bandage
applied round the knee. The reason why
the bandage is continued up the thigh
is to compress the extensor muscles and
thus to diminish their power of contract-
ing - a flint long enough to reach from
the heel to the tuberosity of the ischium,
and rolled up in flannel, should then
~~be~~ be applied under the leg & confined
by a roller. When the knee joint is in
a state of inflammation the bandage
should not be applied too tight - or the in-
flammation will be very much aggra-
vated - in fact the inflammation should
be somewhat reduced before the bandage
is applied. This bone is generally united
by ligament, tho' sometimes by bony union.

The patient for a long time finds difficulty
in extending the leg. I have seen a man who
had the upper fragment drawn 3 inches from
the lower - yet he walked well enough. The
should exercise the leg as soon as the liga-
ment is formed. The best way to do this is
to set on a table with the leg hanging over.

& to swing it as far as he is able. he will find that he will be able to extend it farther every day. In the treatment of longitudinal fractures nothing more is necessary than to apply a compress of linen on each side of the patella & confine them there by a bandage.

of the Treatment of compound frac-
tures. I will just add a few words here in addition to what I have formerly said on this subject. They are sometimes attended with profuse hemorrhages - if the hemorrhage is profuse & the vessel cannot be taken hold of, apply the tourniquet immediately ^{in order to stop the flow} ~~in order to stop the flow~~ of the blood. If the circulation to the part below is destroyed the limb ought to be amputated immediately. In a compound fracture of the leg when a vessel which cannot be discovered bleeds much - rather than amputate the limb I would take up the femoral artery. ~~but~~ Mortification comes on after compound fracture, do not amputate till the mortification stops. When a fragment of the bone protrudes thro. the skin, if it is small and cannot be replaced easily, it may be taken off with a small saw or pair of nippers. I never saw a case in which it was necessary to dilate the wound in order to reduce the fragment. Any loose fragments of bone must be removed, and any extraneous matter must be taken away if it can be got

at easily. If inflammation comes, bleed, and
use strict antiphlogistic ~~means~~ regimen.
a bread and milk poultice is the best applica-
tion to the wound. After the inflammatory
symptoms have subsided, if the patient is very
weak Port & wine would be useful.

Blisters will be useful to put a stop to
the mortification. But a distinction should
be made between the mortification which
is the consequence of inflammation & that which
is produced by a complete destruction of the
part from some external violence. as for in-
stances when a waggon wheel runs over
the leg it often produces death in part which
sloughs off - it is only in the former kind
that Blisters are necessary.

Tuesday January 20th 1807.

of Dislocation. - when a bone forming a joint
is put out of its natural situation it is said
to be dislocated. it is attended with great pain.
When the surgeon is called early it is very easily
reduced, but when it is of long standing it is
very difficult to reduce it. If inflammation
be bleed, purge, give low diet &c. When it is
hard to reduce the best method I know of
is it is to bleed the patient standing out of both
arms till he faints. It has been proposed
as a substitute for bleeding ad deliquium
to inject strong infusions of Tobacco...

Bleeding and deliquium is not necessary to be used after it has stood a month, for the muscles then cease to contract involuntarily.

Of Luxations of the Jaw Bone - This takes place directly forwards and downwards. Sometimes both condyles are dislocated; & sometimes one only, & then the jaw is drawn sidewise - the patient cannot swallow his saliva - it is generally very easily reduced. The surgeon must pop both thumbs covered with a towel, as far back over the grinders as he can - the other fingers are to be placed under the jaw on the outside - the jaw is now to be pushed forward and downward until it is entirely disengaged - then by gentle pressure it will easily spring back into its natural situation.

Of Luxations of the Vertebrae. I have already spoken. it happens very rarely.

Of Luxations of the os humeri - This bone may be luxated downwards & inwards; downward & forward; & downward & backward: the first is the most common - directly under the acromion a considerable vacuity is formed &

the round head of the bone may be felt by the fingers in the axilla. I have already told you how to distinguish it from a fracture of the head of the bone. In many recent cases of luxation of the head of the humerus the surgeon will be able to reduce it himself. But in many instances a greater force is necessary - when this is the case, two Towels are to be tied round the humerus immediately above the elbow. for the purpose of making the extension - another assistant is to make the counter extension, by placing both hands against the acromion scapula - when the bone is disengaged the surgeon is to draw it directly upwards - ~~the~~ if it is not easily brot. in its place - the assistants making the ~~counter~~ extension are to let ^{go} suddenly - while the surgeon at the same moment - with one hand placed under the upper end of the bone raises it up, & with the other hand on the lower end presses it suddenly down - making the humerus a lever. It is very necessary to make the counter extension against the acromion - otherwise the force of the extension will be applied to the connecting medium between the scapula and Trunk. We prove that the force

would be applied to this place, by this circum-
stances, viz. that in every case where suffi-
cient force was applied to tear the arm
from the body - it never happened at the
shoulder joint, but the scapula was al-
ways torn off from the body with the
arm. If you do not succeed by these
methods, before you apply the pulleys to
be spoken off directly; bleed at Deliquium
arivum - when it may be reduced with
the greatest imaginable ease. when the
patient objects to bleeding try the strong
injection of Tobacco. I have succeeded
in reducing them after they were out
9 Weeks - And I have the pleasure of in-
forming you that a case was lately suc-
ceeded in, in Baltimore where it had been
out 16 weeks... Adhesions sometimes
take place between the bone & surrounding
sound parts, under the axilla after it has been dislo-
cated a long time - In this case Pulleys are neces-
sary to break the adhesions & reduce the bone.
The pulley is to be fastened to the bandage above
the elbow, & may be tightened by a screw.

tant - the counter extension is to be made by a bandage fastened to a hook on the opposite side of the patient - the bandage is to be placed over the patient's head & fastened on the acromion process - at the place where it comes in contact with the acromion it should be stuffed with hair, or some other soft substance. When the bone is disengaged in this manner, draw down the arm & fasten it to the side by a roller.

Luxations of the elbow joint. It generally happens backward & upward - I have seen it laterally. When it is dislocated backward and upward the hook of the olecranon can be easily felt. You generally find the patient with the forearm bent. The extension & counter extension is to be made by two assistants - at the wrist and humerus. While the surgeon brings the bones in place. I have never seen any difficulty in reducing luxations of the elbow. The Wrist is sometimes luxated - it is sometimes mistaken for a fracture of the Radius, & a fracture of the radius for a luxation. It can be very easily reduced. The fingers are sometimes luxated. the upper phalanx passes behind the lower - it can be reduced by moderate extension. The Thumb is sometimes dislocated inwards over the metacarpal bones - When a complete dislocation

takes place it is very difficult to reduce.

Friday January 23^d 1807.

of luxations of the Thigh bone at the
hip joint. This takes place upward & back-
ward, or ^{down}ward and forward. & directly back-
ward - or upward & forward - or directly
downwards. It resembles a fracture of the neck
of the bone. When it is dislocated backwards the
foot is turned inwards, & cannot be turned
outward. When downward & forward the leg
is always longer. When downward and
forward the leg is always longer than usual.
In this case the foot is turned outward. When
it is dislocated forward & upwards the limb will
be shortened and the foot turned outward -
the round head of the bone may be felt in
the groin. Extension & counter extension
must be made in every case in the direc-
tion of the limb. this extension is made
on the thigh, & the counter extension over
the pelvis. The head of the bone is mostly
lodged on the head of the acetabulum...
When the bone is luxated upward & backward
it is mostly necessary to have pulleys. tho
sometimes 4 or 5 men will answer the pur-
pose. The patient is to be laid on his back
and in order to relax the muscles the leg

is to be bent on the Thigh & the Thigh on the
reclino. a strong bandage is to be passed between
the legs, & fastened to a hook on the opposite side,
of the ^{at the head} patient - for the purpose of making the
counter extension. 2 towels are then to be fast-
ened to ~~the~~ ^{the} above the knee by a roller for
the purpose of making the extension the towels
are to be ~~formed~~ fastened to a pulley - while the
extension is making in this way the Surgeon is
to rotate the bone by moving the leg. In some
cases it is necessary to pass a towel round the
upper part of the thigh which is to be passed
over the shoulder of an assistant for the
purpose of drawing up the head of the bone
from the brim of the pelvis. The Dr. and one
assistant have reduced this bone very easily
after bleeding him ad deliquium. When
dislocated downward and forwards the head
of the bone is felt on the inside - the leg is
lengthened & the foot turned out. The method
of reducing it is nearly the same - except that the
hand passed round the upper end of the thigh
over the shoulder of the assistant is absolutely
necessary - the assistant at the same time making
the counter extension by his knee or foot placed
on the pelvis. And if the assistant cannot exert
a sufficient force ^{to raise} the bone up to the acetabulum (33)

the patient may be laid on his back in this way any degree of force may be applied by the bandage or towel passed round the upper end of the bone. Of Luxations of the knee

this happens very rarely - I never saw but two cases of it - & in both it was dislocation at the side. There is such laceration of the capsular ligament that it is very easily reduced. the patient must be kept still for 8 or 10 weeks or it will be again dislocated. apply the long splint of Desault. of Luxations of the ankle - it mostly happens from violent abduction of the foot. there is very great pain -

It is easily reduced by extension & counter extension. When it is dislocated forward on the instep, while the extension is making the assistant must press down the Tibia.

Luxations of the patella - rarely happens - ~~is~~ but when it does, it is mostly outward.

if it may be reduced easily by moderately extending the leg - after it is reduced the patient must be kept in bed for several days. of

Sprains - Keep the joint perfectly at rest for sometime - immerse it in cold water. Or pour cold water on it. Read Desault & Bouchard on Luxations & fractures. they are both very useful works.

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still the same."
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